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Two new species of *Amalda* from the Saya de Malha Bank (Gastropoda: Olividae: Ancillinae)

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Amalda danilai and *A. trippneri* n. spp. are described from the Saya de Malha Bank, between Mauritius and the Seychelles.

Key words: Taxonomy, Olividae, Ancillinae, *Amalda*, Mascarene Ridge.

Introduction

The Saya de Malha Bank forms part of the Mascarene Ridge, a narrow plateau that extends approximately from Mauritius to the Seychelles. Although little is known about its molluscan fauna, its benthos was extensively sampled by a succession of Russian expeditions between 1962 and 1989 (see Bondarev & Röckel (1992) for a general account). Prior to this, the only published report on the molluscs was that of Melvill (1909), based on a few samples taken in 1905 by the Percy Sladen Trust Expedition. Since these expeditions, papers have appeared on species of Volutidae (Bouchet & Bail, 1991), Cassidae (Abbott, 1993) and Conidae (Röckel & Korn, 1990).

Amongst the more conspicuous new species dredged by the Russian expeditions are several Olividae of the subfamily Ancillinae, specimens of which, from the collection of Mr Henrikas Danila of Lithuania, have been sent to me by Dr Axel Alf of Ludwigsburg, Germany. There are described below.

Terminology in the description follows Kilburn (1977).

Taxonomy

Genus *Amalda* H. & A. Adams, 1853

Amalda danilai n. sp.

Pl. 1, figs 1–2

Ancilla sp.; Bondarev & Röckel 1992: 30, colour fig. 1 (p. 31).

Description: Shell oblong-ovate-fusiform with moderately broad base, breadth/length 0.43–0.45, body whorl more or less evenly convex on both sides, greatest width of shell more or less median, aperture moderately large, aperture length/total length 0.48–0.52; spire cyrtoconoid with somewhat mamillate apex, spire angle about 44° , apical angle about 58° . Primary callus thick and enveloping entire spire except for protoconch, deeply impressed at final suture, surface of callus glossy, not microshagreened, but with 6 strong spiral ridges; secondary callus forms a pad covering entire right side of spire, with a narrow anterior extension reaching the false umbilicus. Aperture lanceolate, very bluntly rounded posteriorly, widest at about middle; outer lip in side view straight, very slightly prosocline, with a very blunt basal denticle; siphonal notch moderately deep, narrowly and asymmetrically U-shaped. Columellar pillar strongly twisted, its termination acute, with a very deep, inverted L-shaped basal notch; pleats 2–4, the innermost only slightly weaker than others, outermost separated by a slightly wider groove; microshagreen sculpture not visible. Anterior fasciolar groove fairly wide and deep for genus, continuing posteriorly to form a shallow false umbilicus posterior to

Plate 1. *Amalda danilai* and *Amalda trippneri* n. spp. 1–2, holotype of *A. danilai*, Natal Museum L1606/T979, dimensions 34.4 x 15.1 mm. 3–4, holotype of *A. trippneri*, Natal Museum L1607/T980, dimensions 53.8 x 19.6 mm.

midline of inner lip; inner lip evenly concave anteriorly, in parietal region becoming convex with 5 weak transverse pleats. Anterior fasciolar band convex, posterior fasciolar band flattened and slightly declivous, its posterior margin raised prominently above ancillid band and delimited by a deep furrow; ancillid groove moderately deep, its band very slightly rounded and declivous; median zone with fine growth lines only. Number of teleoconch whorls indeterminate.

Protoconch conically-domed, of about 2,5 whorls (limit not clear), protoconch 1 small and depressed; breadth about 1.7 mm.

Median zone greyish-white; callus deposits pure white, except for a deep brownish-orange blotch encircling apex (but not colouring protoconch), and a pale buff zone below suture of body whorl dorsally and a faint buff tinge on adjacent spire callus.

Dimensions: 34.4 x 15.1 mm, aperture 17.3 mm (holotype); largest paratype 44.6 x 22.7 mm.

Type material: Holotype Natal Museum L1606/T979, don H. Danila. Three paratypes in collection H. Danila.

Type locality: Saya de Malha Bank. 1989, No other details are provided, but the holotype may be from the sample for which Bondarev & Röckel (1992) give the depth as 60 m.

Notes: In shape and spire characters, *Amalda danilai* would appear to be a typical member of subgenus *Alocospira* Cossmann, 1899, yet the development of a false umbilicus, albeit slight, could also be interpreted as associating it with the genus *Eburna* Lamarck, 1801. Indeed Voskuil (1991), in a review of that genus, regarded *Amalda* as a subgenus of *Eburna*, although proposing that the former should be restricted to western hemisphere species. A possible sister species to *A. danilai* is *Ancilla nitida* Wanner & Hahn, 1935, from the lower Miocene of Java, which has a similar coarsely grooved spire callus, deeply notched columella base and a false umbilicus that is even more deeply perforate. Treating the distinct false umbilicus as apomorphic, Kilburn (1981) suggested that *nitida* could be regarded as an Indo-Pacific representative of *Eburna*. However, it is more likely that the development of a false umbilicus is convergent, and both *nitida* and *danilai* are here referred to *Amalda s.l.*.

Amalda nitida differs from *A. danilai* in its much deeper false umbilicus, spirally grooved posterior fasciolar band and more strongly furrowed spire callus. Of Recent species, *A. danilai* shows closest similarity to *Amalda mamillata* (Hinds, 1844) of the South China Sea, which differs in having more numerous spiral ridges and stronger microshagreen sculpture on the spire, a non-mamillate apex, shallower columella notch, no false umbilicus and different coloration.

Etymology: Named in honour of Mr Henrikas Danila.

Amalda trippneri sp. n.

Pl. 1, figs 3–4

Ancilla rubiginosa (*non* Swainson, 1825); Melvill 1909: 113.

Ancilla sp; Bondarev & Röckel 1992: 30, colour figs 2–3 (p. 31).

Description: Shell fusiform with moderately broad base, breadth/length 0.36–0.39, body whorl gently and more or less evenly convex on both sides, greatest width of shell anterior to median, aperture length/total length 0.44–0.45; spire narrowly cyrtoconoid with blunt apex, spire angle 31°–35°. Primary spire callus thick and enveloping entire spire except for protoconch 1, only slightly impressed at suture, surface of callus glossy, not microshagreened, but with spiral ridges more or less visible under surface, not apparent in relief, except sometimes for about 5 lirae on 1st teleoconch whorl and 1–3 above suture on penultimate whorl; secondary callus forms a pad covering right side of spire from 2nd teleoconch whorl on, with a narrow anterior extension reaching posterior fasciolar

band. Aperture somewhat lanceolate, but obliquely truncate posteriorly, widest anterior to middle, outer lip in side view very shallowly sigmoid and very slightly prosocline, with two very blunt basal denticles, one on each side of termination of posterior fasciolar band; siphonal notch moderate, broadly and asymmetrically U-shaped. Columella pillar strongly twisted, its termination acute, with a very deep, inverted L-shaped basal notch; pleats 4–6, the innermost weak, outermost separated by a slightly wider and deeper groove; microshagreen sculpture not visible. Anterior fasciolar groove fairly deep and wide for genus, continuing posteriorly to form a very slight false umbilicus at midline of inner lip; inner lip shallowly concave anteriorly, apart from a slight convexity anterior to level of false umbilicus; parietal region weakly convex with faint traces of several transverse pleats. Anterior and posterior fasciolar bands each flattened to concave, moderately declivous, posterior margin raised prominently above ancillid band and delimited by a furrow; ancillid groove moderately deep, its band very slightly rounded, either level with median zone or sunken; median zone with fine growth lines only. Number of teleoconch whorls probably about 5.

Protoconch limits not clear, protoconch 1 flattened.

Median zone pale buff to cream; posterior band darker (deep to pale buff), spire callus deposit tinged with orange-buff or yellow.

Dimensions: 53.8 x 19.6 mm (holotype); 62.7 x 24.4 mm (larger paratype).

Type material: Holotype Natal Museum L1607/T980, don. H. Danila. Two paratypes in collection H. Danila.

Type locality: Saya de Malha Bank, 1989.

Plate 2. *Amalda rubiginosa* (Swainson, 1825): holotype of *Ancillaria rubiginosa*, Natural History Museum, London, 19785, dimensions 68.4 x 27.5 mm, "China".

Notes: *Amalda trippneri* belongs to the *A. hilgendorfi* species-complex (see Kilburn & Bouchet 1988: 285). It is closest in appearance to *Amalda rubiginosa* (Swainson, 1825) and *A. hilgendorfi* (von Martens, 1897). Indeed, *A. trippneri* is doubtlessly the species recorded from the Saya de Malha Bank in 150 fathoms by Melvill (1909) as *Ancilla rubiginosa*, although the actual specimen ("one broken shell") cannot now be traced (it is not in the Melvill collection (National Museum of Wales), nor in that of the Natural History Museum, London). The true *Amalda rubiginosa* (Pl. 2) has a lower spire than *A. trippneri* (aperture length/total length 0.50–0.54, spire angle 39°–47°, n = 14), a sharper apex with the entire protoconch exposed, and fine microshagreen sculpture on the secondary callus. It should be noted that the correct name for the *Baryspira rubiginosa* of modern authors is *Amalda albocallosa* (Lischke, 1873), and that the true habitat of the very different *A. rubiginosa* remains uncertain. All specimens examined by me originate from 19th century collections, and most are labelled "China" (the type locality), which is restricted to "Hong Kong" in the case of two examples from the Lombe-Taylor collection, housed in the Natural History Museum (London). This locality may prove to be correct, as the holotype of *Amalda* (*Alocospira*) *hayashii* Ninomiya (1988: 145, pl. 1, figs 7–8) from Amami-Oshima, southern Japan, is very possibly based on an immature individual of *A. rubiginosa*.

Amalda hilgendorfi, a form or subspecies of which occurs off Madagascar, lacks spiral lirae on the spire, the spire callus is distinctly microshagreened, the ancillid groove is barely impressed and the anterior fasciolar band bears a median ridge.

Etymology: At Dr Alf's request I have named this species in honour of Mr Edmund Trippner, well known among German collectors for his helpfulness and generosity.

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Literature cited

Abbott, R.T. (1993). *Phalium* (*Semicassis*) *vector*, a new deep-water species from the Central Indian Ocean. Nautilus 107: 94–96.

Bondarev, I. & Röckel, D. (1992). The shells of the Saya de Malha Bank. La Conchiglia 23(262): 21–38. Rome.

Bouchet, P. & Bail, P. (1991). Volutes from Saya de Malha Bank: the saga of *Lyria surinamensis* and a new species. Nautilus 105: 159–164.

Kilburn, R.N. (1977). Descriptions of new species of *Amalda* and *Chilotygma*, with a note on the systematics of *Amalda, Ancillus and Ancillista.* Annals of the Natal Museum. 23(1): 13–21.

Kilburn, R.N. (1981). Revision of the genus *Ancilla.* Annals of the Natal Museum. 24(2): 349–463. Pietermaritzburg.

Kilburn, R.N. & Bouchet, P. (1988). The genus *Amalda* in New Caledonia. Bulletin du Muséum national d'Histoire naturelle, Paris [4]10: 277–300. Paris

Melvill, J.C. (1909). Report on the marine Mollusca obtained by Mr J. Stanley Gardiner, F.R.S., among the islands of the Indian Ocean in 1905. Transactions of the Linnean Society of London. [2nd, Zoology] 3(1): 65–138, pl. 5. London.

Ninomiya, T. (1988). A new subgenus and five new species of the Ancillinae from southwestern Australia, Japan and Taiwan. Venus 47(3): 141–154, pl. 1. Tokyo.

Röckel, D. & Korn, W. (1990). *Conus* sp. from the Western Indian Ocean, dredged by Soviet biologists. Acta Conchyiorum 2: 45–49.

Voskuil, R.P.A. (1991). The recent species of the genus *Eburna* Lamarck, 1801. Vita Marina 41(2): 49–55.